

**To:** Mann, Laurie[mann.laurie@epa.gov]  
**From:** Laurie Mann  
**Sent:** Mon 5/8/2017 4:20:35 PM  
**Subject:** Fw: South Puget Sound Dissolved Oxygen Study - Schedule delayed another year!

----- Forwarded by Laurie Mann/R10/USEPA/US on 05/08/2017 09:20 AM -----

From: "Ragsdale, Dave (ECY)" <RAGS461@ECY.WA.GOV>  
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Date: 01/21/2010 09:58 AM  
Subject: FW: South Puget Sound Dissolved Oxygen Study - Schedule delayed another year!

Hello Dave, Mike and Christine.

Ecology just sent the message below which announces that completion of the South Sound D.O. study will be delayed into 2011. This study report had been scheduled for completion this spring. No one should be surprised if additional delays extend this schedule further into the future, considering the complexity of the modeling effort. Given the state's track record for developing controversial TMDLs it is reasonable to expect Ecology will take years to develop a TMDL subsequent to completion of the water quality evaluation.

This situation should spawn a dialog between EPA and Ecology about permitting dischargers to South/Central Puget Sound during the interim before completion of the TMDL being contemplated. It is a fact that dissolved oxygen levels in portions of south Puget Sound are impaired by excessive nitrogen loading. The hydrology model indicates that wastewater discharged by central PS dischargers is reaching the southern end of the Sound. However, the exact influence of those central Puget Sound dischargers on the water quality problems in south Puget Sound will not be determined until the ongoing study is completed. The central Puget Sound dischargers include the big King County plants. Ecology's evaluation has already determined that at least 80% of the nitrogen loading into south/central PS during the critical summer growing season originates from the municipal WWTPs discharging directly into these waters. Another fact is that the Olympia (LOTT) WWTP is the only municipal discharger to these waters currently providing state-of-the-science treatment for nitrogen removal.

## Ex. 5 - Deliberative Process

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Last note: The pharmaceutical and personal care products (PPCPs) study I proposed and coauthored with Ecology-EAP staff will be published/posted before the end of next week. That study confirmed the findings of other studies... that advanced treatment for nutrient removal also provides significant co-removal of many PPCPs, including endocrine disruptors. These findings provide added incentive for requiring better than baseline secondary treatment of municipal wastewater.

Hope to talk with you soon.

David Ragsdale, Engineer  
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**From:** Kolosseus, Andrew (ECY) [mailto:AKOL461@ECY.WA.GOV]  
**Sent:** Wednesday, January 20, 2010 4:00 PM  
**To:** Kolosseus, Andrew (ECY)  
**Subject:** South Puget Sound Dissolved Oxygen Study

Updates on the South Puget Sound Dissolved Oxygen Study:

The Department of Ecology has released a video discussing the South Puget Sound Dissolved Oxygen Study. In the video, we describe the sources of nitrogen, preliminary findings, and the next steps of the project. The 14-minute overview video, along with more information on the study, is available on our website at [http://www.ecy.wa.gov/puget\\_sound/dissolved\\_oxygen\\_study.html](http://www.ecy.wa.gov/puget_sound/dissolved_oxygen_study.html).

We also have a new schedule for completing the South Puget Sound Dissolved Oxygen Study. We now anticipate completing the water quality report (the third piece of the study) in 2011. Originally, we had planned to finish it by mid-2010.

If you have questions on the South Puget Sound Dissolved Oxygen Study, or would like to meet with Ecology to discuss the study, please contact me.

Sincerely,

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